

ARCHWAYS.MAZES AND LABYRINTHS

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Leonardo da Vinci;

An arch is nothing other than a strength caused by two weaknesses; for the arch in buildings is made up of two segments of a circle, and each of these segments being in itself very weak desires to fall, and as the one withstands the downfall of the other the two weaknesses are converted to a single strength. arched support.

(1)

My preoccupation is the free standing arch, the interruption of ones journey by the definition of space. One walks around it or through it but our navigation through the space is necessarily related to the presence of the archway. It is nothing other than space between columns and yet there is a majesty to the ceremony of separation, passage, emergence.

I find that buildings which incorporate many arches such as places of worship and elaborate residences and commercial architecture the visual power of the arch is retained, and often enhanced with repetition, but the confrontation with the arch is lost.

If one approaches a triumphal arch or an archway that stands at the entrance to a city

or square it is evident that our passage through the arch is symbolic.

It is possible then to distinguish the kind of experience to be gained from arches and vaults in interior architecture and that which is had with arches of a symbolic nature.

To recognise that there is a response to these constructions leads me to question what motivates this response, what is it composed of and what is the consequence of this encounter with a simple architectural form.

The notion of an archway embodies the concept of passage, of passing from one place to the next and if we reflect on places in ourselves this can mean anything. It can be a physical emotional or spiritual journey that we equate with our passing through the columns which support the arch.

By passing between two columns the individual becomes the central axis or pillar of consciousness and equilibrium, for they have just passed between two opposite pillars of the Tree of Life and has thereby come into direct contact with the source of Being. It is possible to assume that the arch encourages us to enter our own soul to such an

extent that we find the place which mirrors the infinity of the world.

The sense of occasion that is inherent in the archway enhances the gravity of the approach and the feeling of importance as we emerge. It seems we might be trying to elevate our thoughts to justify our strength of statement that the archway makes. We aspire to a more intense and deeply lived life.

It seems there are two forces in operation. That which is inherent in us to respond to a stimulus of passageways, of potential loss, of anticipation for the unknown, the unknown of our own creation, the shedding which is not always loss but a release and the sense of emergence that we must rise to. Secondly the grandness of the archway presents us with a challenge to meet and match the occasion of this contrived division of space. That we are worthy of emerging.

The consequence of entering this space not only physically but mentally is of course dependent on the individual. The extent to which one chooses to reflect, if at all, will determine how far the analogy is taken into their lives. However, the physical presence of the arch will always leave us with the impression of being set on our path, in a similar way that a colonnade of trees will affirm our

direction. And as one enters through an archway or travels through a maze or labyrinth so one must emerge.

Descriptions of the Tree of Life or the Cosmic Tree conjure what I see in archways;

'The Tree of Life, or Cosmic Tree, penetrates the three zones of heaven, earth and underworld, its branches penetrating the celestial world and its roots descending into the abyss. Uniting the luminous world of consciousness to the dark underworld of the unconscious and drawing nourishment from both the heavenly immaterial world of intelligible meaning and the earthly material world of sensory perception. It creates the magical intermediary world of images.' (2)

In Christian symbolism the Virgin Mary is the Gate of Heaven. Like the eye of the needle the gate symbolises the spacelessness of the soul in passing through, it is associated with wisdom. In a reading of the 'Gateway' rune from the Viking Runes it is considered the frontier between heaven and the mundane. Arriving at the gateway is a recognition of one's readiness to contact the numinous, the Divine.

THRESHOLD

The triumphal arch was widely used throughout the Roman Empire not only as a testament to triumph in battle but to glory and power as manifested in remarkable structures in stone. An equal number of these arches can be found in the Eastern and Western provinces although there is a perceivable difference in the role that these arches play. In the West there seems to be more common use of the arch as a Triumphal Arch proper whereas in the East the arch is employed as a monumental entrance to the city, to its squares and buildings and related to colonnaded streets.

The triple arch is more common in the East and this is possibly due to the arches close association with the street, the outside arches leading to the colonnades lining the roadway.

The Eastern style of arch is distinguished from the Western by its lack of relief decoration. There can be many niches flanking the passage-way and columns to define and divide the space but the Eastern designs of archways followed the traditions of Hellenism that the facade be treated as an architectural structure and not as a support for reliefs.

The basis of the evolution for all openings is the post and lintel system. Two upright members hold up a third member which is laid horizontally across their top surfaces.

The post and lintel system was the root of architectural design from Pre-historic times to the Roman Empire. The interiors of Egyptian temples and the exteriors of Greek temples are delineated by columns covered by stone lintels.

The development of the arch and vault and their loadbearing qualities resulted in a sophistication of design in architecture in Roman times. Previously the span of a post and lintel could only be quite small because of the heavy weight and weakness in bending of the materials but with the invention of the arch two problems were solved;

- 1) wide openings could be spanned with small blocks of stone which could be easily moved and handled and,
- 2) the arch is bent upwards to resist the load that tended to bend the lintel downward and the weight is conducted to supports.

The arch is only effective if the posts are large enough to buttress the load. Arches can rest on light supports, however, if they occur in a row as in an aqueduct or bridge, and they are buttressed at either end by walls or earth.

Interior arches, such as those in churches, required complex engineering for the time to support such high arches which would come down to rest on walls that had openings in them,

usually more arches.

A precursor to the interior arch was the barrel vault which appeared first in ancient Egypt and the Near East. It is an arch deep enough to cover a three dimensional space and like the arch it exerts a load along the entire length of its walls. This is a disadvantage in that it limits the number and size of openings and this in turn inhibits light and circulation.

The Roman builders found that openings could be made by building two barrel vaults that intersected at right angles, to form the groin vault, so that the load is concentrated at the four corners and the walls need not be uniformly supportive. Groin vaults appeared in Rome about 1st century B.C.

A further development of the interior arch support was devised by Gothic builders. There were two main disadvantages with groin vaulting and they were that the construction had to be more or less square and secondly groin vaulting required complex scaffolding from the ground up so that the vault could be poured or laid.

The device of rib vaults developed around 1125 provided a skeleton of arches along the sides of the area and crossing it diagonally. On these ribs the masonry of the vault could be laid. Pointed arches were used to achieve

strength over rectangular areas because unlike round arches they can be raised as high over a long span as over a short one.

Gothic builders also developed a flying buttress around 1180 which counteracts vault load not by a continuous wall mass but by a counterthrust provided by exterior half arches placed at the height of the vaults at the points of greatest stress. This enabled large areas of masonry to be replaced with glass and lead to some sublime interior spaces.

Rib vaulting and flying buttresses remained the strongest way to construct interior arches until new materials were employed in the framework of buildings in the nineteenth century. Iron skeleton vaults were constructed as a framework for light materials such as glass, as in the Crystal Palace.

The symbolic and spiritual interpretation of the arch seems to me to have a relationship with the symbolism of labyrinths and mazes. The notion that entry brings one into contact with the Divine operates as much with manifestations of labyrinths in churches, those constructed from stones near the sea and mazes cut into the turf seemingly for the purpose of recreation as much as the ceremonial and monumental approach to any large free standing arch.

THE PASSAGE

Symbolically, physically and metaphorically, labyrinths and mazes are connected to the idea of death and rebirth closely associated with the 'Universal Mother' from where, some believe, we come. It was the imagery used to access and transcend the spiritual realms and in several countries labyrinth and maze dances were an integral part of festivals and celebrations of rebirth and renewal.

The antiquity of mazes can be traced back to long before the advent of Christianity. One Egyptian plaque which displays a labyrinthine pattern is dated as early as 3,000 B.C.

One labyrinthine structure, an Egyptian temple built by twelve kings as a memorial to themselves, is estimated to have been constructed around 2,000 B.C. Very little is known about the structure because the immense building is thought to have been taken apart over centuries by people wanting to use the stone.

This Egyptian labyrinth is thought to have predated the legendary Cretan labyrinth which is the most widely known of the ancient labyrinths and has set some mythological precedent for fables of danger and heroics which has continued to manifest itself in a range of symbolic associations.

The story of the Cretan labyrinth is that Minos, King of Crete (who later became a

judge in the underworld), ordered Daedalus to design and build the labyrinth to house a minotaur at the centre. Daedalus was an engineer attributed with many inventions such as masts and sails for ships, the plumb line and the legendary wax wings of Icarus. The minotaur was the offspring of a union between Minos's wife, Pasiphae, and a bull. Minos used the minotaur in the labyrinth as a revenge against Athens where he believed his son was treacherously murdered. He ordered that seven Athenian young boys and girls be sent to Knossus every nine years and they were all in turn put into the labyrinth, where they would certainly be lost and eventually be devoured by the minotaur.

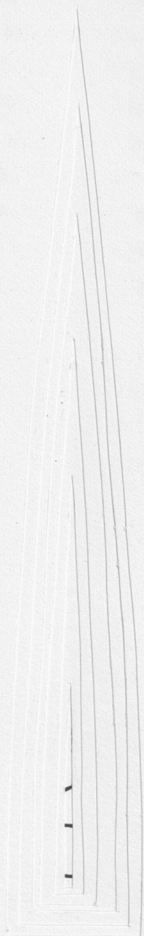
At the time of the third payment Theseus, the son of Aegeus, King of Athens, volunteered to be one of the fourteen sacrificed to the minotaur and his plan was to defeat the bull and therefore cancel the debt. Once the 14 were in Knossus Ariadne, daughter of Minos, was attracted to Theseus and not wishing to see him die she gave him a sword and a length of thread to use to escape the labyrinth, by tying it to the outside and unrolling it as he went further in. Theseus was, of course, successful in slaying the minotaur and leading the other thirteen to safety back out of the labyrinth.

Consequent images of

the labyrinth in churches usually pict this final scene of Theseus slaying the Minotaur, usually in the centre.

Early associations of the labyrinth with death are evident in Egyptian tombs and fables of the

death guides requiring dead spirits to complete a labyrinth pattern before they could enter the kingdom of the dead. Some Egyptian pyramids have complex internal maze corridors which are evidence of the physical difficulty in entering the innermost chamber.



The word labyrinth is thought to mean 'place of stone' which would suggest association with caves and underground passages. W.F. Jackson Knight says;

'The labyrinth is a boundary between without and within, it is the entrance to the tomb, it is the cave which is the entrance to the earth and possibly it is the body of the earth mother, and the divine king also.' (3)

'Caerdroia' was the name given to mazes cut out in the turf by the shepherds in the Welsh hills. There is some disagreement as to whether caerdroia means 'City of Troy' (Troy was considered a labyrinth city

because the plan was that Troy was defended by seven walls and the entrance was made as intricate as possible in order to frustrate any attacking force.) or if it is the Welsh caer y troian which means 'city of windings / turnings'. In Cumberland the herdsmen would cut mazes in the turf, they called them 'walls of Troy'.

There are three significant types of labyrinths and mazes of the type that are laid out on the ground. They are the church labyrinths, the turf mazes and the stone mazes. They can be simply straight in and straight out - unicursal or complex with dead ends - multi cursal.

Church labyrinths are more commonly found in Italy and France and other examples occur all over Europe. The oldest known

example of a mosaic labyrinth worked into the floor is in Algeria in the Church of Rep-aratus. It dates back to 400 A.D. They are found in the walls and floors and those in Italian churches are generally smaller than the French examples.

Church mazes are mostly made of tile but are sometimes carved into stone and the traditional religious interpretation is that they were constructed to represent the folds of sin which bar man's passage into heaven. Following a maze in church was a substitute for a pilgrimage to the holy land, sometimes the journey was undertaken on the knees as an added penance.

Other suggestions for their occurrence in churches are that they were used as an analogy by the builder to a former glorious structure and hopefully to impart a portion of its monumental status to the church which housed its likeness. The architect of the church often placed his own image in the form of Daedalus in the centre of the labyrinth. Some writers believed that labyrinths were inserted into churches to represent the typical life of the Christian or the devious course of those who yield to temptation. An interesting observation of these church labyrinths is that none of the known examples have any distinctively Christian emblems occurring in or around them. As a further detail on the relationship between Christianity and the laby-

rinth in the inscriptions ,paintings and carvings of the early Christians from Rome and elsewhere there is no evidence of labyrinths.

Turf mazes are found in England,Germany,Italy,France,Sweden, and Iceland.They are more prevalent in England however and they may be regarded as the English equivalent to the European church mazes.Their origin is thought to be a legacy of roman occupation because there are references to labyrinth games in both Pliny's 'Natural History' and Virgil's 'Aeneid'.

Pliny suggests that we must not compare the Egyptian and Cretan labyrinths with *'what we see traced on our mosaic pavements or to the mazes formed in the fields for the entertainment of children.'*(4).This shows that the practise of turf maze games was common and it is reasonable to assume that the Romans would bring this pastime to the colonies.

They are found in various counties usually under local names such as 'Mizmaze' , 'Julians Bower' , Troy Town' , or 'Shepherds Race'.Even though the labyrinth predates Christianity many of the mazes are built in close proximity to ancient ecclesiastical sites.This strengthens the idea that labyrinths were associated with Divine contemplation but there is not sufficient evidence to establish a connection between the two things.

As an argument against this the turf mazes are frequently found to be situated

close to Roman remains and it is the case that many of the older churches in England were founded on Roman sites.

In 1866 a correspondent writing to 'Notes and Queries' under the monogram 'J.F.' wrote of his impressions after watching villagers playing May - eve games on and around the turf maze known as 'Julians Bower' in Alkborough, *'under an indefinite persuasion of something unseen and unknown co-operating with them.'*(5).This is an interesting allusion to make to maze rituals in an attempt to describe something which is felt,but difficult to describe.

The stone mazes are mostly found in Sweden,Finland ,Germany, Lappland and Iceland.The names they are given are quite different from the English turf mazes;'Giants Fence' , 'Ruins of Jerusalem' , 'Walls of Jericho' , 'Stone Fence' , 'Maiden's Dance' , 'Nuns Fence' , 'Troy Town'.

They are often constructed near the sea and it is thought that not only were the mazes used as a fishermans pastime but also to guard against misfortune.The sailors would complete the maze before sailing and having ceremoniously entered the realm of death they would thereby avoid mishap on their journey

Many Games and dances have been devised around spiral,maze and labyrinthine patterns.One ancient dance originating in Delos and thought to have represented the path of Theseus in the Cretan labyrinth was called the 'Geranos' or 'Crane Dance'. *'The dancers having danced into a labyrinth from right to left,the direction of*

involution and death, turn around in the centre and, following their leader dance out again in the opposite direction, that of evolution and birth. The pattern of the spirals in the Geranos dance signifies the continuation of life beyond death, the intimation of immortality. (6).

Many English dances which celebrate the oncoming of Spring and fertility are associated in their history with maze and spiral dances and these origins are sometimes still evident. Morris dancing rituals are of great antiquity and related to fertility and maze dances. Two Cornish dances the 'Snails Creep' and 'Roll Tobacco' are described as a single file of dancers winding into a spiral and then, turning in a contrary direction, unwinding and retracing their steps.

Mazes called 'Walls of Troy' were drawn on the sand on Scottish beaches as late as the 1920's as a game for children. The nature of the game was to run, in procession, to the centre and then out again. There are references which lead us to believe that the game of 'Hopscotch' is labyrinthine in origin. Roger Caillois in his book 'Man, Play and Games' says that 'In antiquity, hopscotch was a labyrinth in which one pushed a stone

i.e. the soul - toward the exit. With Christianity, the design became elongated and simplified, reproducing the layout of a basilica. The problem in moving the stone became to help the soul attain heaven, paradise, halo, or glory, coinciding with

the high altar of the church, and schematical represented on the ground by a series of rectangles. (7).

In Cornwall the spiral form of hopscotch was called 'Snail Creep' referring to the spiral nature of the dance of the same name described earlier. Another game which was popular across England in the 18th century was the 'Shepherds Race'. It is not clear what the game actually was but it is known that the game was run on a turf maze and often conducted at Spring carnivals or times of celebration. This name is given to the game because of the maze cut into the turf at Boughton Green, in Nottinghamshire. The 'treading' of this maze was a high point in the three day fair held every June dating back to 1353. This maze remained until the First World War when trenches were dug across it by soldiers in training and the damage was never restored.

The labyrinth is a means of defence against the demonic forces of chaos which continually threaten the centre. It operates in a domestic or social context primarily to keep evil spirits or misfortune at bay. It is believed that evil spirits can only move in a straight line so the winding and turning incorporated into the entrances of castles and larger old houses were designed for this purpose.

The spiral or labyrinth, depicted in ancient tombs, implies a death and re-entry into the womb of the earth, necessary before the spirit can be reborn in the land of the dead. The spiral is a talisman to ensure rebirth. Death and rebirth

also mean the continuous transformation and purification of the spirit through life. A symbolic descent into the under world is nearly always represented with the motif of a spiral.

The model of a labyrinth or spiral is not so significant in its outward form ,but rather the movement it causes us to make.The motions of a spiral dance in space constitute our circuitous windings through time and space.

The spiral dance is continued today by Sufi mystics,the order of the Mevlana Dervishes. What are known as the 'whirling Dervishes'.Their dancing emulates the whirling of the planets and the dance of the atoms,activelyincorporating the creative vibrations and ordering movements of the cosmos.By their progressive whirling the spirits of the Dervishes spiral up through the celestial orbits to union with the Divine.

EMERGENCE

As a consequence of pursuing separate interests I find that what appears unconnected is in fact quite closely linked on a symbolic framework. The nature of contemplation, which is what the arches draw us into, is continued into concentration if we follow the paths of the mazes and labyrinths and in this way we can perceive a difference in the two.

My preoccupation with the arch has been to explore the idea of an interruption in the journey and therefore to become conscious of the journey. The consequence of embarking on that journey, in the symbolic

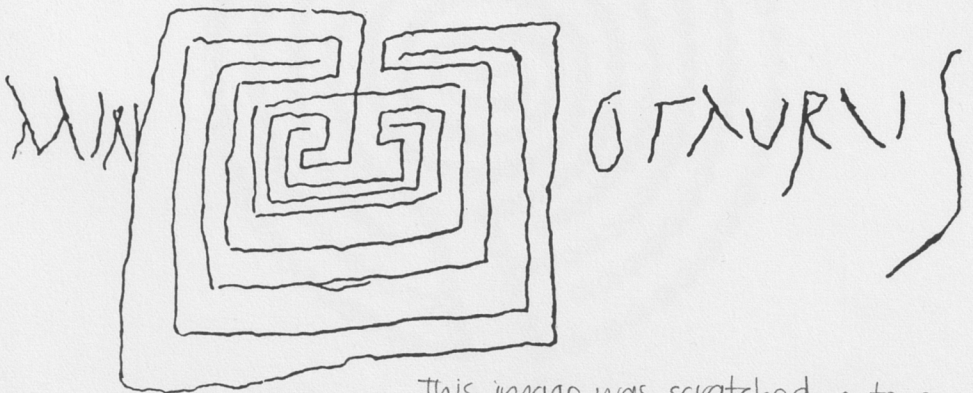
sense of exploring one's soul or psyche, is to some extent to come into contact with a space or a being that is not only larger than oneself but is felt to be larger than most things on a physical scale that we encounter.

This serves to heighten our awareness of our passage through time. In the same vein the continuation of certain dances, rituals and customs today that still involve spiral or labyrinthine movements will affirm the sense of rebirth that is analogous to spiral imagery. The connection with the past and, as a consequence of repetition, the future as well.

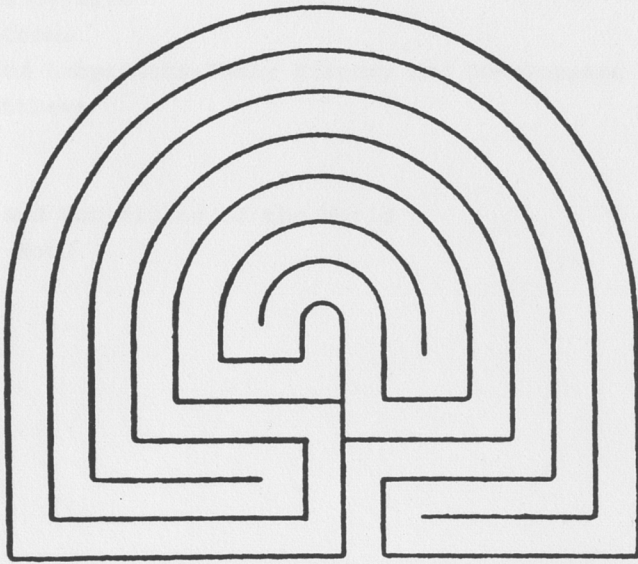


This mosaic pavement was discovered in 1830
in the Canton of Friburg, Switzerland.

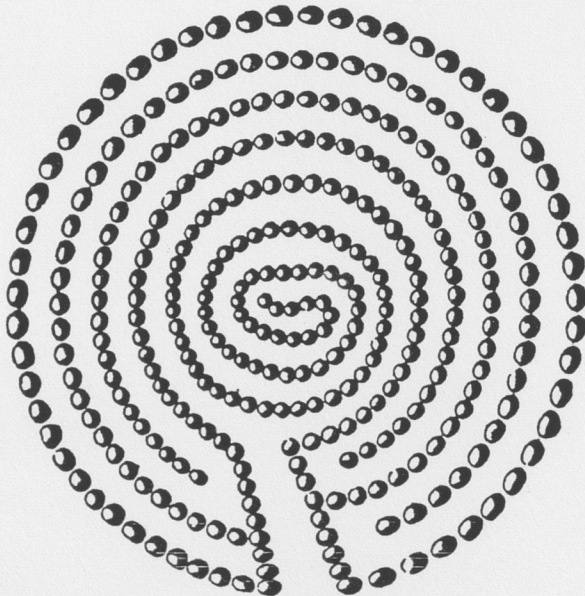
LABYRINTHUS
HABITAT



This image was scratched onto a
pillar 2,000 years ago in Pompeii



One of the English turf mazes called
'caerdroida'



Large pebble labyrinth found in 1838
on the Finnish island of weir.

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